# SCIENCE

FRIDAY, NOVEMBER 14, 1913

CONTENTS



MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

## *NATIONAL ACADEMIES AND THE PROGRESS OF RESEARCH*

### I. THE WORK OF EUROPEAN ACADEMIES

THE Academy of Plato, who bequeathed to his followers the walled garden and appointments in the place named after the hero Hekademus, was at once a school of instruction and a society for the development of new knowledge. Here he discussed his philosophy with associates and students, while it was still in the making, thus bringing them under the stimulating influence of fresh thought, developing and expanding from day to day. Writing of the Old Academy, which included the schools of Plato and his immediate successors, Cicero remarks:

> Their writings and method contain all liberal learning, all history, all polite discourse; and besides they embrace such a variety of arts, that no one can undertake any noble career without their aid. . . . In a word the academy is, as it were, the workshop of every artist.[1]

The Old Academy was thus the predecessor of our modern academies of science and of our universities as well. Its world-wide influence, while of course primarily due to the brilliant thinkers of the day, may certainly be ascribed in part to the fact that its instruction was given in an atmosphere charged with the stimulus of original thought and constantly broadening ideas. The great success of the German universities, and the outflow from them of the spirit of research into every phase of German life and thought, is undoubtedly due in the largest measure to the application of this principle. Fortunately for the intel-

[1] Cicero, "De Fin.," Vol. 3, as quoted in the Encyclopædia Britannica, 11th edition, Vol. 1, p. 106.